

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/060861 A2

- (51) International Patent Classification⁷: C07D Nishi-ku, Kobe, 651-2277 (JP). BARNY, Stefan [CH/CH]; Stallenmattstrasse 5, CH-OBERWIL 4104 (CH).
- (21) International Application Number: PCT/EP2003/050926 (74) Agent: MAUÉ, Paul Georg; Solvias AG, Patents, WKL-402.3.04, Klybeckstrasse 191, CH-4002 Basel (CH).
- (22) International Filing Date: 2 December 2003 (02.12.2003) (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2074/02 6 December 2002 (06.12.2002) CH
1095/03 23 June 2003 (23.06.2003) CH
- (71) Applicant (*for all designated States except US*): HUNTS-MAN ADVANCED MATERIALS (SWITZERLAND) GMBH [CH/CH]; Klybeckstrasse 200, CH-4057 Basel (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): STUDER, Peggy [FR/FR]; 13, rue du Président Wilson, F-68330 Huningue (FR). SCHEIFELE, Patrick [CH/CH]; Witterswilerfeldweg 35, CH-4106 Therwil (CH). STÖSSEL, Richard [CH/CH]; Rösemstrasse 38, CH-4402 Frenkendorf (CH). MATSUMOTO, Yonetatsu [JP/JP]; 2-2-33 Mikatadai,
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: CROSSLINKABLE, PHOTOACTIVE POLYMERS AND THEIR USE

(57) **Abstract:** Copolymers composed of (a) at least one monomer from the group of acrylates, methacrylates, acrylamides and methacrylamides, to each of which is bonded covalently, directly or via a bridging group, a photochemically isomerizable or dimerizable molecule, (b) at least one polyoxyalkyl ester or one polyoxyalkylamide of an ethylenically unsaturated mono- or dicarboxylic acid, or one polyoxyalkyl ether of an ethylenically unsaturated alcohol, and (c) optionally, other ethylenically unsaturated comonomers are outstandingly suitable as alignment layers for liquid crystals.

WO 2004/060861 A2